

REMARKS/ARGUMENTS

Claims 1-13 are pending in the application; the status of the claims is as follows:

Claims 1, 3, 6, and 11 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,184,853 B1 to Hebiguchi et al. ("Hebiguchi").

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi as applied to claim 1, and further in view of U.S. Patent No. 6,501,454 B1 to Ozawa et al. ("Ozawa").

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi as applied to claim 1, and further in view of U.S. Patent No. 5,526,014 to Shiba et al. ("Shiba").

Claims 7, 8, 12, and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi as applied to claim 1, and further in view of U.S. Patent No. 5,091,557 to Nagai et al. ("Nagai").

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi as applied to claim 1, and further in view of U.S. Patent No. 6,243,061 B1 to Sandoe et al. ("Sandoe").

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi and Ozawa as applied to claim 2, and further in view of Sandoe.

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The acknowledgement, in the Office Action, of a claim for foreign priority under 35 U.S.C. § 119(a)-(d), and that the certified copy of the priority document has been received, is noted with appreciation.

To date, no Notice of Draftsperson's Patent Drawing Review has been received. Applicants respectfully request acceptance of the substitute formal drawings filed on January 4, 2002.

Claim 5 has been amended to correct a spelling error. This change is not necessitated by the prior art, is unrelated to the patentability of the invention over the prior art, and does not introduce any new matter.

35 U.S.C. § 102(e) Rejection

The rejection of claims 1, 3, 6, and 11 under 35 U.S.C. § 102(e) as being anticipated by Hebiguchi, is respectfully traversed based on the following.

The present application defines the fields based upon the physical location, i.e., the number of the scanning line. The fields are then driven in an interlaced manner with a discontinuous pattern, i.e., the fields are not driven such that line 1 is followed by line 2, and then line 3, and then line 4. Driving the fields in this continuous manner leads to the generation of a "thick black line" as noted in paragraph 5 on page 2 of the present application. These black lines form when adjacent lines are erased and then written to in sequence, the effect causing a series of black lines to progress across the screen. However, by defining and driving the fields such that adjacent lines are not sequentially erased and rewritten, such black lines are not formed. Thus, in claim 1, the fields, corresponding to scanning lines, are scanned such that the order is discontinued at least once. In other words, line 1 will not be followed by lines 2, 3, and 4, corresponding to fields 1-4, in scanning order sequence. This is described in the various scanning examples beginning in paragraph 67 on page 25 of the present application. In the first scanning example, the scanning line/field order is 1, 3, 2, and 4, clearly a discontinued order. The remaining scanning examples provides scanning line/field orders of 1/3/5/2/4, 1/4/2/5/3, 1/3/5/7/2/4/6, and 1/4/7/2/5/3/6. Clearly each of these provides a discontinued order for scanning the lines/fields.

It contrast, Hebiguchi clearly discloses a continuous scanning order. The Office Action claims Figure 15 of Hebiguchi discloses a discontinuous scanning order. Such is clearly not the case. As can be seen, F1, corresponding to field 1, includes scanning line 1 and all scanning lines described by $1 + 4n$, where n is an integer. Similarly, F2 includes

scanning line 2, and all scanning lines described by $2 + 4n$, while F3 includes scanning lines 3 and $3 + 4n$, and F4 includes scanning lines 4 and $4 + 4n$. Therefore, as Hebiguchi scans the fields in the sequence shown in Figure 15, the scanning order will be lines 1, then 2, 3, and 4 in this order, a clearly continued order. Using Hebiguchi's definitions for fields, then the scanning order would need to be discontinued to correspond to claim 1. In other words, using Hebiguchi's field definitions, the scanning order would need to be something other than the F1, F2, F3, F4 sequence Hebiguchi discloses. As Hebiguchi does not disclose or suggest a scanning order that is discontinued as required by claim 1, Hebiguchi cannot anticipate or render obvious the invention of claim 1.

Claims 3 and 6 depend from claim 1. As claim 1 is considered unanticipated and nonobvious over Hebiguchi, claims 3 and 6 are considered unanticipated and nonobvious over Hebiguchi for at least the same reasons.

As will be discussed below, claim 10 is considered nonobvious over the combination of Hebiguchi, Ozawa, and Sandoe. As claim 11 depends from nonobvious claim 10, claim 11 is considered nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 1, 3, 6, and 11 under 35 U.S.C. § 102(e) as being anticipated by Hebiguchi, be reconsidered and withdrawn.

35 U.S.C. § 103(a) Rejections

The rejection of claim 2 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi as applied to claim 1, and further in view of Ozawa, is respectfully traversed based on the following.

As shown above, Hebiguchi does not disclose or suggest driving fields such that a scanning order of the fields is discontinued at least once as required by claim 1. Ozawa similarly fails to disclose or suggest driving fields in a scanning order that is discontinued

at least once. The closest Ozawa comes to defining four fields is in Figure 33 in which COM(i), COM(i+1), COM(i+2), and COM(i+3) could possibly be considered four fields. However, as can be seen in Figure 33, the fields are not driven in a scanning order that is discontinued at least once. In fact, COM(i) and COM(i+1) are driven simultaneously, while COM(i+2) and COM(i+3) are driven simultaneously, i.e., the scanning order is not discontinued at least once. Therefore, the combination of Hebiguchi and Ozawa does not disclose or suggest a scanning order that is discontinued at least once as required by claim 1. Because the combination of Hebiguchi and Ozawa do not disclose or suggest each limitation of claim 1, the combination of Hebiguchi and Ozawa cannot render obvious the invention of claim 1. As claim 2 depends from claim 1, the combination of Hebiguchi and Ozawa cannot render obvious the invention of claim 2 for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi as applied to claim 1, and further in view of Ozawa, be reconsidered and withdrawn.

The rejection of claim 4 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi as applied to claim 1, and further in view of Shiba, is respectfully traversed based on the following.

Claim 4 depends from claim 1. As claim 1 is considered unanticipated and nonobvious over Hebiguchi, claim 4 is considered unanticipated and nonobvious over Hebiguchi for at least the same reasons. Further, Shiba likewise fails to disclose or suggest driving fields in a scanning order that is discontinued at least once. In fact, Shiba is completely silent with respect to the scanning order of any fields. Therefore, the combination of Hebiguchi and Shiba does not disclose or suggest driving fields in a scanning order that is discontinued at least once. Because the combination of Hebiguchi and Shiba fails to disclose or suggest driving fields in a scanning order that is discontinued at least once, the combination of Hebiguchi and Shiba cannot render obvious the invention

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of claim 1. As claim 4 depends from claim 1, claim 4 is considered nonobvious over the combination of Hebiguchi and Shiba for at least the same reasons as claim 1.

Accordingly, it is respectfully requested that the rejection of claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi as applied to claim 1, and further in view of Shiba, be reconsidered and withdrawn.

The rejection of claims 7, 8, 12, and 13 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi as applied to claim 1, and further in view of Nagai, is respectfully traversed based on the following.

Claims 7 and 8 depend, either directly or indirectly, from claim 1. As claim 1 is considered unanticipated and nonobvious over Hebiguchi, claims 7 and 8 are considered unanticipated and nonobvious over Hebiguchi for at least the same reasons. Further, Nagai likewise fails to disclose or suggest driving fields in a scanning order that is discontinued at least once. In fact, Nagai is completely silent with respect to the scanning order of any fields. Therefore, the combination of Hebiguchi and Nagai does not disclose or suggest driving fields in a scanning order that is discontinued at least once. Because the combination of Hebiguchi and Nagai fails to disclose or suggest driving fields in a scanning order that is discontinued at least once, the combination of Hebiguchi and Nagai cannot render obvious the invention of claim 1. As claims 7 and 8 depend from claim 1, claims 7 and 8 are considered nonobvious over the combination of Hebiguchi and Nagai for at least the same reasons as claim 1.

As will be discussed below, claim 10 is considered nonobvious over the combination of Hebiguchi, Ozawa, and Sandoe. As claims 12 and 13 depend from nonobvious claim 10, claims 12 and 13 are considered nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 7, 8, 12, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi as applied to claim 1, and further in view of Nagai, be reconsidered and withdrawn.

The rejection of claim 9 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi as applied to claim 1, and further in view of Sandoe, is respectfully traversed based on the following.

Claim 9 depends from 1. As claim 1 is considered unanticipated and nonobvious over Hebiguchi, claim 9 is considered unanticipated and nonobvious over Hebiguchi for at least the same reasons. Further, Sandoe likewise fails to disclose or suggest driving fields in a scanning order that is discontinued at least once. The only possible use of fields is illustrated in Figures 11 and 12, corresponding to the description beginning in column 11, line 29 through column 13, line 15 of Sandoe. As found in column 11, lines 34 and 35, the Figures 11 and 12 illustrate "two successive row conductors, rows r and $r+1$." As successive rows cannot be considered a discontinued scanning order as required by claim 1, Sandoe fails to disclose or suggest a limitation of claim 1. Therefore, the combination of Hebiguchi and Sandoe does not disclose or suggest driving fields in a scanning order that is discontinued at least once. Because the combination of Hebiguchi and Sandoe fails to disclose or suggest driving fields in a scanning order that is discontinued at least once, the combination of Hebiguchi and Sandoe cannot render obvious the invention of claim 1. As claim 9 depends from claim 1, claim 9 is considered nonobvious over the combination of Hebiguchi and Sandoe for at least the same reasons as claim 1.

Accordingly, it is respectfully requested that the rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi as applied to claim 1, and further in view of Sandoe, be reconsidered and withdrawn.

The rejection of claim 10 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi and Ozawa as applied to claim 2, and further in view of Sandoe, is respectfully traversed based on the following.

By this amendment, claim 10 has been amended to clarify that the scanning of a next field starts upon the end timing of the reset period, *which is not the end of the field scanning period*.

Sandoe discloses that scanning begins after the reset period, which is the end of the field scanning period. In the invention of claim 10, in contrast, the scanning of a next field starts upon the end of the reset period which is not the end of the field scanning period. Instead, as recited by claim 10, the field scanning period comprises, in order, a reset period for resetting a state of liquid crystals, *followed by* a selection period for selecting a final display state of the liquid crystals, and a maintaining period for establishing the state selected at the selection period. Thus, as recited by claim 10, the start scanning timing of a next field *does not wait* until the end of the scanning of a previous field scanning period.

Ozawa also fails to disclose, suggest or teach a scanning system configuration which employs this scanning configuration.

Therefore, the combination of Hebiguchi, Ozawa, and Sandoe does not disclose or suggest an apparatus that “start[s] scanning of a next field based on an end timing of a reset period of a previous field,” as required by claim 10, as amended. Because the combination of Hebiguchi, Ozawa, and Sandoe fail to disclose or suggest a limitation of claim 10, the combination cannot render claim 10 obvious.

Accordingly, it is respectfully requested that the rejection of claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi and Ozawa as applied to claim 2, and further in view of Sandoe, be reconsidered and withdrawn.

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CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a fee, other than the issue fee, is due, please charge this fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

Any fee required by this document other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee,

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Respectfully submitted,

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